

USB 2.0 16X DVD Writer

**DVD±R 16X, DVD+R DL 8X, DVD-R DL 4X,
DVD-RAM 5X, DVD+RW 8X, DVD-RW 6X**

12 in 1 card reader compatibility

User's Manual

CLASS 1 LASER PRODUCT
APPAREIL A LASER DE CLASSE 1
LASER KLASSE 1
LUOKAN 1 LASERLAITE
PRODUIT LASER
CATEGORIE 1

CAUTION

CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN.
AVOID DIRECT EXPOSURE TO BEAM.

VORSICHT

KLASSE 3B SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG WENN
GEOFFNET. NICHT IN DEN STRAHL SEHEN.

ATTENTION

RADIATION DU FAISCEAU LASER VISIBLES ET INVISIBLES DE CLASSE 3B
EN CAS D'OUVERTURE. EVITER TOUTE EXPOSITION AUX RAYONS.

Copyright Statement

It is a criminal offence, under applicable copyright laws, to make unauthorised copies of copyright-protected material, including computer programs, films, broadcasts and sound recordings. This equipment should not be used for such purposes.

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC Warning Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide

reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one or more of the following measures:

- ◆ Reorient or relocate the receiving antenna
- ◆ Increase the separation between the equipment and the receiver
- ◆ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- ◆ Consult the dealer or an experienced radio/TV technician for help.

CAUTION

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FOR EUROPE



“The drive is in conformity with the EMC directive and low-voltage directive.”



Disposal of Old Electrical & Electronic Equipment
(Applicable in the European Union and other European
countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

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INTRODUCTION

Accompanying the new DVD storage technology, we are honored to present you a compact and multiformat external drive with USB 2.0 interface: DVD Writer supporting DVD±R/RW and DVD-RAM writing.

This USB 2.0 DVD Writer frees up precious bay space and offers more backup choices other than acting as a CD-R/RW drive and as a DVD-ROM reader. It supports DVD+R/RW, DVD-R/RW, and DVD-RAM enabling excellent compatibility, simple, quick recording of both CD/DVD formats, huge capacity storage, and theater-quality playback.

The bundled package of application software offers the creation fun of video, photos, and music editing. You can either record up to 8.5GB, 4 hours of TV shows or movies into high-quality DVD video, or author your own DVD movies – from capture to editing and burning, which both are playable in most DVD players and DVD-ROM drives.

And that isn't all, the built-in 12 in 1 card reader which offers read-write ability of 12 memory card types simplifies the process of exchanging data between Digital cameras, camcorders, voice recorders, PDAs, MP3s... and your computer. You can view, archive, or write the files/photos/video/music of the memory card directly from the drive and enjoy the fascinating digital/DVD entertainment on your desktop.

Here are some important features of this drive:

- USB 2.0 interface, easy to connect to USB 2.0 port in PC
- Four-slot integration of the card reader works with CompactFlash (CF) Type I, II, MicroDrive, Memory Stick (MS), MS Duo, MS Pro, MS Pro Duo, MultiMediaCard (MMC), Reduced-Size MMC (RS-MMC), Secure Digital (SD), mini SD, and SmartMedia (SM)
- Convenient connection with A-Type USB Extension Port on the front panel

- 16X DVD±R , 8X DVD+R Double Layer , and 4X DVD-R Dual Layer writing; 5X DVD-RAM , 8X DVD+RW, and 6X DVD-RW rewriting speed; and 16X DVD-ROM reading speed
- 48X CD-R writing, 24X CD-RW rewriting, and 48X CD-ROM reading speed
- Adopts “MTKSuperLink” technology to prevent buffer underrun errors of CD & DVD writing
- Supports writing modes of TAO, DAO, SAO and packet writing
- Supports MultiRead function
- Serves as RPC-2 DVD-ROM Drive
- Smooth DVD playback
- Compatible with most existing DVD-ROM drives and DVD video players
- Bundled with an extensive application software package

About USB

USB (Universal Serial Bus), a means of attaching devices to your computer, is basically a standardized intelligent serial connection which provides an expandable, hot-pluggable^{*1} interface. Devices suitable for USB range from simple items like mice and keyboards to more complicated devices like printers, MP3 players, and storage devices. One other benefit of USB is plug and play. That is, when you plug the USB device in, it is automatically detected, drivers installed and then ready for operation.

USB 2.0 supports data transfer at rate up to 480Mbps for high-speed devices. It is backward compatible with USB1.1^{*2} software and peripherals. If your computer doesn't have a built-in USB 2.0 port, you need to install a USB 2.0 PCI host card in your pc for the drive to run at USB 2.0 speed. Otherwise, this drive will run at standard USB speed.

*¹ You can connect and disconnect devices while the computer is running.

*² USB 1.1 can transfer data at rate up to 12Mbps.

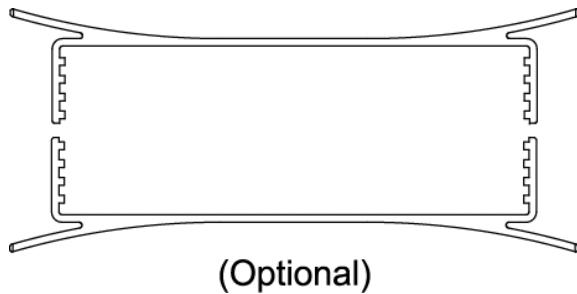
System Requirements

For IBM compatible PCs, the system requirements recommended are as follows:

- Pentium III, 800MHz or above with at least 256MB of memory
- Minimum 2GB free Hard Disk space
- Operating system: Microsoft Windows 98SE/ME/2000/XP
- USB 2.0 PCI host card (If there's no USB 2.0 built-in port in the PC system.)

Package Contents

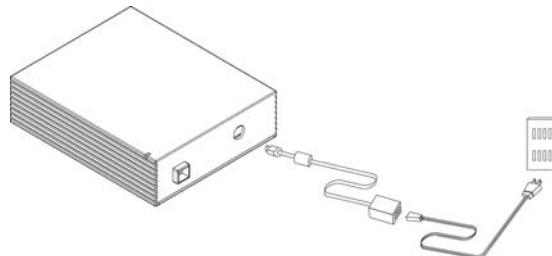
- USB 2.0 DVD Writer
- Power adapter with power cord.
- USB 2.0 cable
- Application software disc
- Quick installation Guide
- Holder (Optional)



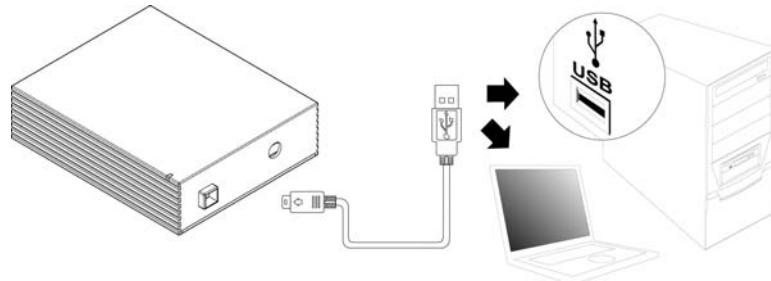
INSTALLATION

Hardware Installation

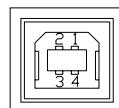
1. Connect the power adapter with the AC power cord to the drive.



2. Attach the USB 2.0 cable to the drive.



USB Connector



3. Attach the other end of the USB 2.0 cable to the USB port in your computer. The drive is now ready to use.

♦ *If you are installing a USB 2.0 drive, your computer must have a USB 2.0 port to achieve the highest speed. You may experience slower drive performance if connected to USB 1.1.*

Note:

- ◆ Be sure to use the USB 2.0 cable bundled with the drive.
- ◆ Never plug or unplug in any other USB device while the drive is transferring data. It's likely to lose data.
- ◆ It's advisable not to disconnect the drive or unplug the power to the drive while a CD is inserted.
- ◆ Do not connect more than two rewritable optical drives to USB port of the computer.

Driver Installation

Windows Environment

This DVD Writer is a PnP (Plug and Play) device, and Windows ME/2000/XP can automatically detect the drive and load the appropriate driver. For the users who run Windows 98SE, please install the driver in the bundled disc via the following path: "D:\Half High Series\External Series\UB Series\Drivers\WIN98 Driver\Setup.exe", where D is your drive letter, and then restart the computer.

Card Reader

Please install the driver in the DVD playback disc to operate the read-write ability of 12 memory card types. Follow the path: "D:\Half High Series\External Series\UB Series\Drivers\Card Reader Driver\Setup.exe" After the driver installation, 4 extra icons with different card type indicated will show in Device Manager/My computer. And then you can use each slot of the card reader for file archiving / recording.

Software Package

The bundled package combines software for 1) DVD/CD recording 2) DVDs/VCDs authoring 3) Packet Writing, which gives you the complete solution for making audio/data CDs/DVDs of different formats, editing video and authoring DVD movies. The user-friendly interface simplifies the recording process and guides you through the creation in an easy and

innovative way. No matter you are a novice or an experienced user; this is your best recording tools with the writer.

Installation Under Windows Environment

1. Insert the application CD and the installation program will run automatically. Then follow the on-screen procedures.

Or

2. Run:**lsetup.exe** on the application CD.

DVD Regional Code

Region Playback Control Management

All DVD Video Playback systems have “Region Playback Control” management (RPC) which is required by Hollywood movie industry and defined by DVD Forum. This includes DVD-Video players and PC systems with DVD-Video capability. You can only play DVD-Video discs with the same regional code as your DVD-Video Playback system.

As for DVD-ROM drives, one kind of the DVD-Video Playback system, there are 2 types:

RPC Phase 1 (as RPC1): RPC1 drives do not have built-in hardware support for region management. DVD-ROM drives of this kind don't play a part in controlling the playback region. It solely depends on the decoder.

RPC Phase 2 (as RPC2): RPC2 drives maintain the regional code change count information in hardware, and in general, the regional code of such drives can be changed up to 5 times by the end users under some software decoder (e.g. PowerDVD).

And referring to the regional codes, there are 6 regions worldwide, and normally, there is a regional code mark on the package of DVD titles. :

Region 1: Canada, US

Region **2**: Japan, Europe, South Africa, and Middle East (including Egypt)

Region **3**: Southeast Asia and East Asia (including Hong Kong)

Region **4**: Australia, New Zealand, Pacific Islands, Central America, Mexico, South America, and the Caribbean

Region **5**: Eastern Europe, Indian subcontinent, Africa, North Korea, and Mongolia

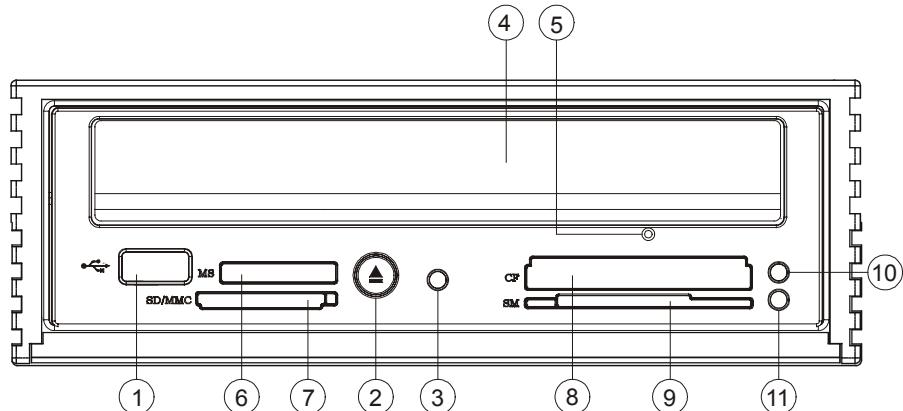
Region **6**: China

About This Drive

This DVD Writer is also a RPC2 DVD-ROM drive and according to DVD-Forum, PC chip must be designed into DVD-ROM drives to record how many times a user has changed the regional code. The first regional code will depend on the DVD title you play and you are allowed to modify the regional code 5 times (including the initial one). After the fifth alteration, the regional code will be locked and only those DVD titles of the same regional code could be played afterwards, so set the code carefully.

OPERATION & CONNECTION

Front Panel



1. A-Type USB Extension Port

This USB port is Plug-and-Play Ready. Just plug your USB device and the computer will detect automatically.

2. Close/Eject Button

This button opens and closes the disc tray. If the tray is closed, pressing the button will eject it.

3. Led Indicator (DVD-Dual Drive)

While the tray goes in/out, the LED flashes **green** and it's off when the drive is ready.

The LED flashes “**green**” while verifying or reading a disc and flashes “**green**” while writing discs.

4. Disc Tray

Place the disc in the tray here, and then press the Close/Eject button or lightly push the tray to close it.

5. Emergency Eject Hole

When the Close/Eject button doesn't work properly and the disc tray can't be opened, you can insert a paper clip or a small rod into this hole for manual ejection. Please make sure to power off the system before you do that.

6. Slot for Memory Stick (MS)/MS Duo/MS Pro/MS Pro Duo

7. Slot for Secure Digital (SD)/Mini SD/MultiMediaCard (MMC) /Mini MMC

8. Slot for Compact Flash (CF) Type I, II/MicroDrive

9. Slot for Smart Media (SM)

10. LED Indicator (Card Reader)

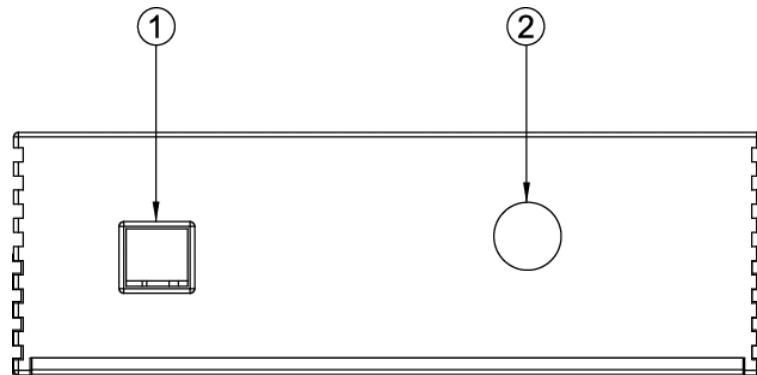
When the data of memory cards is being accessed, the LED flashes **red**.

11. LED Indicator (Card Reader)

Once the USB cable is correctly connected, this LED will light **green**, which means the card slots are ready to use.

Note: The design of front panel is subject to change without notice.

Rear View



- 1. USB Connector**
- 2. D.C. Power Connector**

TECHNICAL DATA

Interface	USB 2.0
Disc Capacity	DVD+/-R, DVD+/-RW: Single layer 4.7GB Double layer 8.5GB DVD-RAM: 4.7GB CD-R/RW: 74min/650MB, 80min/700MB
Media supported for Writing	DVD+R, DVD+R DL, DVD-R, DVD-R DL, DVD-RAM, DVD+RW, DVD-RW, CD-R, CD-RW
Applicable Formats	DVD+/-R, DVD-RAM, DVD+/-RW, DVD+/-R DL, DVD-ROM, DVD-Video CD-DA, CD-ROM, CD-ROM XA, CD-Extra, CD-I, Mixed-Mode CD, Video CD, Photo CD, CD-Text, Bootable CD, CD-R, CD-RW, Multi-Session
Writing modes	Track at Once, Disc at Once, Session at Once, Multi-Session, Packet Writing, Multi- track Reservation
Writing Speed	DVD+R: max. 16X DVD-R: max. 16X DVD-RAM: max. 5X DVD+R DL: max. 8X DVD-R DL: max. 4X DVD+RW: max. 8X DVD-RW: max. 6X CD-R: max. 48X CD-RW: max. 24X
Reading Compatibility	CD Audio, CD-Extra, CD-ROM/XA, CD-I, Photo CD, Video CD, CD-Text, DVD-ROM, DVD+/-R, DVD+/-RW, DVD-RAM, DVD+/-R DL

Reading Speed	DVD+/- R: max. 12X, DVD-RAM: max. 5X DVD+/-RW: max. 8X DVD+R/-R DL: max. 8X CD-R: max. 48X CD-RW: max. 32X CD-ROM: max. 48X DVD-ROM: max. 16X
Digital Media	CompactFlash (CF) Type I, II, MicroDrive, Memory Stick (MS), MS Duo, MS Pro, MS Pro Duo, MultiMediaCard (MMC), mini MMC, Secure Digital (SD), mini SD, and SmartMedia (SM)
Data Transfer Rate	<p>CD -- Read CD-ROM/CD-R: 7200KB/sec (up to 48X) CD-RW: 4800KB/sec (up to 32X)</p> <p>CD -- Write CD-R: 7200KB/sec (up to 48X) CD-RW: 3600KB/sec (up to 24X)</p> <p>DVD -- Read DVD-ROM: 21632KB/sec (up to 16X)</p> <p>DVD -- Write DVD+R: 21632KB/sec (up to 16X) DVD -R: 21632KB/sec (up to 16X) DVD-RAM: 6760KB/sec (up to 5X) DVD+R DL: 10816KB/sec (up to 8X) DVD-R DL: 5408KB/sec (up to 4X) DVD+RW: 10816KB/sec (up to 8X) DVD -RW: 8112KB/sec (up to 6X)</p>
Access time	DVD: 160ms (16X) CD: 130ms (48X)
Data buffer	2MB
Disc loading	Tray (motorized)

Weight	holder (optional accessory 188g (per unit) drive (only) 1160g
Dimension	
Drive without holder	Height 51.5 mm Width 160.0 mm Depth 193.0 mm
Drive with holder (Optional)	Height 77.5 mm Width 193.5 mm Depth 193.0 mm
Mounting Method	Horizontal
RMS output Voltage	Line out = $0.6 \pm 10\%$ Vrms
Power Requirement	input: AC 100~240V, 50/60Hz output: 5V 2.5A, 12V 1.5A
Temperature	Operating 5°C to 45°C Non-operating -20°C to 60°C
Humidity	Operating 8% ~ 80%RH Non-operating 5% ~ 95%RH



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